

X. Specifications

... completed, coordinate with work required in
... required in AAC panels for electrical, plumbing, and
... required depth.
4. Filling in chases and routed areas specified in other Sections.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers:

1. Acceptable manufacturer:
AERCON Florida LLC.
3701 C.R. 544 East
Haines City, FL 33844
Telephone: (863) 422-6361
Fax: (863) 422-6360
Email: info@aercon.com
www.aerconfl.com

2. Substitutions for products listed are prohibited.

2.02 MANUFACTURED PANELS

A. Reinforced AAC panels:

1. Composition: Autoclaved aerated concrete mixture consisting of
proprietary additives, water, and reinforcement.
2. Nominal dimensions:
 - a. Non-Load Bearing Wall panels:
24" (610mm) width
 - b. Floor panels:

Section 03440 - Reinforced Autoclaved Aerated Concrete Panels

Section 04240 - Autoclaved Aerated Concrete Units

SECTION 03440

REINFORCED AUTOCLAVED AERATED CONCRETE PANELS

Date: 3-21-03

SECTION REQUIRES EDITOR TO MAKE SELECTIONS - GENERALLY SELECTIONS ARE PRECEDED BY **. SPEC EDITOR TO DELETE INAPPROPRIATE INFORMATION.

PART 1 - GENERAL

SELECT APPROPRIATE SECTIONS FOR BELOW; DELETE OTHERS

1.01 SUMMARY

- A. Section includes, but is not limited to: Design, fabrication, transportation, and erection of reinforced Autoclaved Aerated Concrete (AAC) structural ** floor, ** wall, ** and roof ** panels.
- B. Related sections:
 - 1. Section 01630: Product Substitution Procedures.
 - 2. Section 03200: Concrete Reinforcement.
 - 3. Section 03300: Cast-in-Place Concrete.
 - 4. Section 03541: Gypsum Underlayment.
 - 5. Section 04070: Masonry Grout.
 - 6. Section 04210: Brick.
 - 7. Section 04240: Autoclaved Aerated Concrete Units.
 - 8. Section 07600: Flashing and Sheet Metal.
 - 9. Section 07840: Firestopping.
 - 10. Section 07920: Joint Sealants.
 - 11. Section 08110: Steel Doors and Frames.
 - 12. Division 9: Finishes.

1.02 REFERENCES

- A. Standards of the following as referenced:
 - 1. American Concrete Institute (ACI).
 - 2. ASTM.
 - 3. Underwriters Laboratories, Inc. (UL).

1.03 DEFINITIONS

- A. Terms:
 - 1. Reinforced AAC panels: Reinforced Autoclaved Aerated Concrete panels.
 - 2. Strength Class: Classification that defines the physical properties of the AAC, designated as AC4, AC4.4 or AC6.

1.04 SYSTEM DESCRIPTION

- A. Design requirements:
 - 1. Basic reinforcement requirements: Reinforce for handling/transportation loads and design loads indicated in Contract Documents.

2. Maximum deflection:
 - a. Floor panels:
 - 1) Live load: $L/360$.
 - 2) Dead plus live load: $L/240$.
 - b. Roof panels:
 - 1) Live load: $L/240$.
 - 2) Dead plus live load: $L/180$.
 - c. Wall panels; wind load: $L/240$.
3. Design for structures supporting AAC roof, floor, and wall panels: $L/360$ maximum total deflection.

1.05 SUBMITTALS

- A. Shop drawings:
 1. Indicate loads used for the design of reinforced AAC panels.
 2. Indicate dimensions of panels, arrangement of joints, reinforcement, and erection details. Include location of openings fabricated in panels.
 3. Identify reinforced AAC panels with mark used on shop drawings. Identifying marks shall be located on surfaces not visible in installed configuration.
 4. Indicate Strength Class.

1.06 QUALITY ASSURANCE

- A. Furnish reinforced AAC panels from single manufacturer.
- B. Mock-ups:
 1. Build a mock-up as directed by Architect.
 2. The following items are to be approved:
 - a. Mortar joints.
 - b. Control joint complete with joint sealant.
 - c. Workmanship.
 - d. Reinforcement, if required.
 - e. Flashing.
 - f. Exterior finishes.
 - g. Interior finishes.
 3. Prepare mock-up at least 14 days prior to beginning AAC unit work. Should mock-up be disapproved, prepare additional mock-ups until approved by Architect.
 4. Maintain mock-up throughout work as standard of AAC unit work. Do not destroy mock-up until directed by Architect.
- C. Pre-installation conferences:
 1. Prior to installation of reinforced AAC panels, schedule and hold a pre-installation conference to review Scope of Work.
 2. Attendees shall include a representative from each subcontractor involved with reinforced AAC panels and adjacent construction material installation.
 3. Notify Architect at least seven days prior to meeting.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Packing and shipping:
 1. Transport and handle reinforced AAC panels with equipment designed to protect panels from strain, warping, cracking, chipping, or staining.
 2. Placing reinforced AAC panels in direct contact with earth is prohibited.

- B. Storage and protection:
 - 1. Store to protect from strain, warping, cracking, chipping, or staining.
 - 2. Store in same position as transported.
 - 3. Store on firm, level, smooth surface.
 - 4. Place so identification marks are easily discernible.

1.08 PROJECT CONDITIONS

- A. Cold and hot weather installation practices for panels installed utilizing thin bed mortar joints:
 - 1. Cold weather precautions for AAC panel work:
 - a. When temperature of AAC panel is below 20°F, do not install panels.
 - b. Remove visible ice on AAC panel prior to installation.
 - c. Heat mortar sand or mixing water to produce mortar temperatures between 40°F and 120°F at time of mixing. Maintain mortar temperature above freezing until placed.
 - d. Ambient temperature requirements:
 - 1) Between 25°F and 20°F: Use heat sources on both sides of AAC panels under construction. Install wind breaks when wind velocity is in excess of 15 mph.
 - 2) Below 20°F: Provide enclosure for AAC panels under construction. Use heat sources to maintain temperatures above 32°F within enclosures.
 - e. Daily mean temperature requirements:
 - 1) Between 40°F and 32°F: Protect completed AAC panels from rain or snow by covering with weather resistive membrane for a minimum of 24 hours after construction.
 - 2) Between 32°F and 25°F: Completely cover completed AAC panels with weather resistive membrane for a minimum of 24 hours after construction.
 - 3) Between 25°F and 20°F: Completely cover completed AAC panels with insulating blankets or equal protection for a minimum of 24 hours after construction.
 - 4) Below 20°F: Maintain AAC panel construction above 32°F for 24 hours after completion by enclosure with supplementary heat, electric heating blankets, infrared heat lamps, or other acceptable methods outlined to Architect.
 - 2. Hot weather precautions for AAC panel work:
 - a. When erected in ambient air temperature of 100°F or ambient air temperature of 90°F with wind velocity in excess of 8 mph, implement the following:
 - 1) Spreading mortar beds more than 4'-0" ahead of AAC panels is prohibited.
 - 2) Installing AAC panel more than two minutes after spreading mortar is prohibited.

1.09 SEQUENCING AND SCHEDULING

- A. Loading AAC wall panels is prohibited prior to the following:
 - 1. Uniform floor or roof loads: 12 hours, minimum.
 - 2. Concentrated loads: Three days, minimum.
- B. Construction activities coordination specified in other Sections for work built into panels:
 - 1. Work required under this Section includes chase and routing coordination with construction activities specified in other Sections.
 - 2. As panel installation is completed, coordinate with work required in other Sections for chases or routing areas required in AAC panels for electrical, plumbing, and other items.
 - 3. Request relevant construction activities to mark actual routing or chase locations; include required depth.
 - 4. Filling in chases and routed areas specified in other Sections.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Manufacturers:

1. Acceptable manufacturer: AERCON Florida LLC.; 3701 C.R. 544 East, Haines City, FL 33844; Telephone: (863) 422-6360; Fax (863) 422-6361.

TYPICALLY, USE BELOW IF CLOSED SPEC

2. Substitutions for products listed are prohibited.

USE THIS SUBPARAGRAPH FOR ALLOWING SUBSTITUTIONS WITHOUT NAMING OTHER MFRS.

3. Products of other manufacturers similar in type, quality, and performance are acceptable, subject to compliance with specified ** requirements.
** requirements and submission of required data indicated in Product Substitution Procedures section.

2.02 MANUFACTURED PANELS

A. Reinforced AAC panels:

1. Composition: Autoclaved aerated concrete mixture consisting of quartz sand, lime, cement, proprietary additives, water, and reinforcement.

SELECT APPROPRIATE THICKNESS(ES) AND USE; DELETE OTHERS; SEVERAL DIFFERENT WALL THICKNESSES REQUIRE MULTIPLE SELECTION.

SELECT STRENGTH CLASS(ES) REQUIRED.

2. Nominal dimensions: **
 - a. Non-Load Bearing Wall panels, reinforced: ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** thickness by 24" (610mm) width; Strength Class ** AC4. ** AC4.4 ** AC6. **
 - b. Floor panels, reinforced: ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** thickness by 24" (610mm) width; Strength Class ** AC4. ** AC6. **
 - c. Roof panels, reinforced: ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** thickness by 24" (610mm) width; Strength Class ** AC4. ** AC6. **
 - d. Load Bearing Wall panels, reinforced: ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** thickness by 24" (608mm) width; Strength Class ** AC4. ** AC6. **

- B. Fire ratings: In accordance with UL 263, UL 1479 and UL 2079.

2.03 ACCESSORIES

- A. Key joint and bond beam reinforcement: ASTM A 615, Grade 60; deformed type for #3 and larger bars; actual sizes indicated on Contract Drawings.
- B. Fasteners and Anchors: Compatible with AAC materials.
- C. Joint sealant: Elite Cement Products, Inc., Atlanta GA; Flex W or equivalent.
- D. Headers and frames:
 1. Headers at penetrations in floor and roof systems: Designed and detailed by AAC Panel Manufacturer.

2. Supplemental steel framing at openings in wall systems: Designed and detailed by Project Engineer of Record.
- E. Mortar materials, acceptable product: AERCON Thin Bed Mortar; AERCON Large Grain Mortar.

2.04 MIXES

- A. Grout proportions:
1. Fine grout: proportion materials by volume in accordance with ASTM C 476.
 2. Slump: 8" to 11" measured in accordance with ASTM C 143.

2.05 FABRICATION

- A. Shop assembly:
1. Fabricate reinforced AAC panels in accordance with approved shop drawings.

PART 3 - EXECUTION

3.01 ERECTION

- A. Reinforced AAC panel work:
1. Follow approved shop drawings for installation of work.
 2. Set reinforced AAC panels plumb, level, and true to line within specified erection tolerances. Dimensional tolerances shall be non-cumulative.
 3. Secure reinforced AAC panels in place as indicated on approved shop drawings.
 4. Provide temporary bracing as required to resist construction loads, including wind.
- B. Building in other work:
1. Install work of other sections required to be incorporated with reinforced AAC panels as work progresses; include anchors, and accessories. Space and align built-in parts; exercise care not to disturb other materials from position.
 2. Fill in interior spaces around built-in items with fine grout or interior plaster.
 3. Fill in exterior spaces around built-in items with fine grout or stucco.
- C. Floor and roof panels: Fill joints between reinforced AAC panels using reinforcing bars and grout, as specified. Mix and place grout in accordance with manufacturer's recommendations. Feather-out grout at joint irregularities.
- D. Cleaning and patching: Patch spalls and chips in reinforced AAC panels in accordance with AAC panel manufacturer's recommendations.

3.02 APPLICATION

- A. Erection Tolerances:
1. Maximum variation from plumb: 1/4" in 10'-0"; not exceeding 3/8" in 20'-0".
 2. Maximum variation from level: 1/4" in 20'-0"; not exceeding 1/2" in 40'-0" or more.
 3. Maximum variation in linear building line from location indicated: 1/4" at base of wall.

END OF SECTION 03440

SECTION 04240

AUTOCLAVED AERATED CONCRETE UNITS

Date: 03-20-03

SECTION REQUIRES EDITOR TO MAKE SELECTIONS - GENERALLY SELECTIONS ARE PRECEDED BY **. SPEC EDITOR TO DELETE INAPPROPRIATE INFORMATION.

PART 1 - GENERAL

SELECT APPROPRIATE SECTIONS FOR BELOW; DELETE OTHERS

1.01 SUMMARY

- A. Section includes, but is not limited to: Fabrication, transportation, and erection of Autoclaved Aerated Concrete (AAC) units.
- B. Related sections:
 - 1. Section 01630: Product Substitution Procedures.
 - 2. Section 03200: Concrete Reinforcement.
 - 3. Section 03300: Cast-in-Place Concrete.
 - 4. Section 04070: Masonry Grout.
 - 5. Section 04210: Brick.
 - 6. Section 07600: Flashing and Sheet Metal.
 - 7. Section 07650: Flexible Flashing.
 - 8. Section 07840: Firestopping.
 - 9. Section 07920: Joint Sealants.
 - 10. Section 08110: Steel Doors and Frames.
 - 11. Division 9: Finishes
 - 12. Division 15: Mechanical.
 - 13. Division 16: Electrical.

1.02 REFERENCES

- A. Standards of the following as referenced:
 - 1. American Concrete Institute (ACI).
 - 2. ASTM.
 - 3. The Masonry Society (TMS).
 - 4. Underwriters Laboratories, Inc. (UL).

1.03 DEFINITIONS

- A. Terms:
 - 1. AAC unit: Autoclaved Aerated Concrete Unit.
 - 2. Bed joint: Horizontal mortar joint between two AAC units.
 - 3. Head joint: Vertical joint between two AAC units.
 - 4. AAC ValuBlock: Nominally rectangular face AAC unit, 24" (608mm) by 24" (608mm).
 - 5. AAC block: Nominally rectangular face AAC unit, 24" (608mm) by 8" (200mm).
 - 6. Strength Class: Classification that defines the physical properties of the AAC, designated as AC2, AC4, or AC6.

1.04 SUBMITTALS

- A. Quality control submittals:
 - 1. Certificate from the AAC manufacturer indicating AAC product is manufactured in accordance with ASTM C 1386.

1.05 QUALITY ASSURANCE

- A. Furnish AAC units from single manufacturer.
- B. Mock-ups:
 - 1. Lay 6'-0" long by 4'-0" high sample wall with AAC units. Orient wall as directed by Architect.
 - 2. The following items are to be approved:
 - a. Mortar joints.
 - b. Control joint complete with joint sealant.
 - c. Workmanship.
 - d. Reinforcement, if required.
 - e. Flashing.
 - f. Exterior finishes.
 - g. Interior finishes.
 - 3. Prepare sample wall at least 14 days prior to beginning AAC unit work. Should wall be disapproved, prepare additional walls until approved by Architect.
 - 4. Maintain wall throughout work as standard of AAC unit work. Do not destroy wall until directed by Architect.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Storage and protection:
 - 1. Offload AAC units and store using pallets resting on ground. Placing AAC units in direct contact with earth is prohibited.
 - 2. Protect AAC units from oil and chemical staining.

1.07 PROJECT CONDITIONS

- A. Cold and hot weather installation practices:
 - 1. Cold weather precautions for AAC masonry work:
 - a. When temperature of AAC units is below 20°F, do not install.
 - b. Remove visible ice on AAC units prior to installation.
 - c. Heat mortar sand or mixing water to produce mortar temperatures between 40°F and 120°F at time of mixing. Maintain mortar temperature above freezing until placed.
 - d. Ambient temperature requirements:
 - 1) Between 25°F and 20°F: Use heat sources on both sides of AAC walls under construction. Install wind breaks when wind velocity is in excess of 15 mph.
 - 2) Below 20°F: Provide enclosure for AAC walls under construction. Use heat sources to maintain temperatures above 32°F within enclosures.
 - e. Daily mean temperature requirements:
 - 1) Between 40°F and 32°F: Protect completed AAC walls from rain or snow by covering with weather resistive membrane for a minimum of 24 hours after construction.
 - 2) Between 32°F and 25°F: Completely cover completed AAC walls with weather resistive membrane for a minimum of 24 hours after construction.
 - 3) Between 25°F and 20°F: Completely cover completed AAC walls with insulating blankets or equal protection for a minimum of 24 hours after construction.

- 4) Below 20°F: Maintain AAC wall construction above 32°F for 24 hours after completion by enclosure with supplementary heat, electric heating blankets, infrared heat lamps, or other acceptable methods outlined to Architect.
2. Hot weather precautions for AAC masonry work:
 - a. When erected in ambient air temperature of 100°F or ambient air temperature of 90°F with wind velocity in excess of 8 mph, implement the following:
 - 1) Protect AAC wall construction from direct exposure to wind and sun.
 - 2) Spreading mortar beds more than 4'-0" ahead of AAC units is prohibited.
 - 3) Setting AAC unit more than one minute after spreading mortar is prohibited.

1.08 SEQUENCING AND SCHEDULING

- A. Loading AAC unit walls or columns is prohibited prior to the following:
 1. Uniform floor or roof loads: 12 hours, minimum.
 2. Concentrated loads: Three days, minimum.
- B. Construction activities coordination specified in other Sections for work built into walls:
 1. Work required under this Section includes chase and routing coordination with construction activities specified in other Sections.
 2. As walls are completed, coordinate with work required in other Sections for chases or routing areas required in AAC walls for electrical, plumbing, and other items.
 3. Request relevant construction activities to mark actual routing or chase locations; include required depth.
 4. Filling in chases and routed areas specified in other Sections.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers:
 1. Acceptable manufacturer: AERCON Florida LLC.; 3701 C.R. 544, Haines City, FL 33844; Telephone: (863) 422-6360; Fax (863) 422-6361.

TYPICALLY, USE BELOW IF CLOSED SPEC

2. Substitutions for products listed are prohibited.

USE THIS SUBPARAGRAPH FOR ALLOWING SUBSTITUTIONS WITHOUT NAMING OTHER MFRS.

3. Products of other manufacturers similar in type, quality, and performance are acceptable, subject to compliance with specified **
 - ** requirements.
 - ** requirements and submission of required data indicated in Product Substitution Procedures section.

2.02 MANUFACTURED UNITS

- A. AAC units:
 1. Composition: Autoclaved aerated concrete mixture consisting of quartz sand, lime, cement, proprietary additives, and water.

SELECT APPROPRIATE THICKNESS(ES) AND USE; DELETE OTHERS; SEVERAL DIFFERENT WALL THICKNESSES REQUIRE MULTIPLE SELECTION. SELECT STRENGTH CLASS(ES) REQUIRED.

2. Nominal dimensions: **
 - a. AAC Block; Tongue and Groove: **4" (100mm) ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** nominal widths by 8" (200mm) nominal height by 24" (610mm) nominal length; Strength Class ** AC2. ** AC4. ** AC6. **
 - b. AAC Block; Flat face head joints: **4" (100mm) ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** nominal widths by 8" (200mm) nominal height by 24" (608mm) nominal length; Strength Class ** AC2. ** AC4. ** AC6. **
 - c. AAC ValuBlock: **4" (100mm) ** 6" (150mm) ** 8" (200mm) ** 10" (240mm) ** 12" (300mm) ** nominal widths by 24" (608mm) nominal height by 24" (608mm) nominal length; Strength Class ** AC2. ** AC4. ** AC6. **

SELECT APPROPRIATE LINTEL TYPE – SOLID REINFORCED TYPE OF “U” TYPE

- d. Solid lintel units; reinforced: Same width as walls by ** 8" (200mm) ** 12" (300mm) ** 16" (403mm) ** 24" (608mm) ** nominal height; Strength Class AC4.
- e. Lintel “U-Block” units: Same width as walls by ** 8" (200mm) ** 10" (240mm) ** nominal height by 24" (608mm) nominal length; Strength Class AC4.

B. Fire ratings: In accordance with UL 263, UL 1479 and UL 2079.

2.03 ACCESSORIES

A. Mortar materials:

1. AAC unit head joint and bed joint mortar; acceptable product: AERCON Thin Bed Mortar.
2. Leveling bed mortar: ASTM C 270, Type “M”.
3. Aggregate:
 - a. Leveling bed mortar: Clean, hard, natural, washed sand in accordance with ASTM C 144.

DELETE SUBPARAGRAPH BELOW IF NO CEMENT GROUT IS REQUIRED.

- a. Masonry grout:
 - Fine aggregate: ASTM C 404, Size No. 1
 - Coarse aggregate: ASTM C 404, Size No. 89.
 4. Water: Clean, potable, free from deleterious amounts of alkalis, acids, and organic materials.
- B. Reinforcement: ASTM A 615, Grade 60, deformed type for #3 and larger bars; actual sizes indicated on Contract Drawings.
- C. Backer rods and sealants: Specified in Joint Sealants Section.
- D. Flexible flashing: Specified in Flexible Flashing Section.
- E. Fire-rated insulation for penetrations of rates walls: Specified in Firestopping Section.
- F. Tension tie-downs; acceptable manufacturer: Go-Bolt, Inc.; DeLand, Florida or equivalent.
- G. Fasteners and Anchors: Compatible with AAC materials.

2.04 MIXES

- A. Mortar proportions:
1. ACC unit head joint and bed joint mortar: Mix in accordance with manufacturer's mixing instructions.
 2. Proportion materials by volume in accordance with ASTM C 270 for leveling course only. Use AAC thin bed mortar for head and bed joints and other joints in AAC work.

DELETE GROUT PROPORTIONS PARAGRAPH IF DELETED ABOVE.

- B. Grout proportions:
1. Fine and Coarse Grout: Proportion materials by volume in accordance with ASTM C 476.
 2. Slump: 8" to 11" measured in accordance with ASTM C 143.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Protection:
1. Keep walls dry during erection by covering at end of each work period with non-staining waterproof membrane covering.
 2. Protect partially completed walls not being worked on with non-staining waterproof membrane until construction activities specified in other sections completes protection of walls.
 3. Covering: Overhang at least 2'-0" on each side of wall; anchor on each side of wall.
 4. Protect finished exposed work from stains.
 5. Take particular care to keep AAC units clean.
 6. Brace walls during construction to protect from wind damage.

3.02 INSTALLATION

- A. Workmanship:
1. Lay AAC units plumb, level, and true to line for range.
 2. Lay units in running bond with 6" minimum head joints lap in alternate courses.
 3. Cut AAC units with unit manufacturer recommended hand type saw or electric bandsaw specially designed for cutting AAC units. **Lay out units to minimize cutting.**
- B. Building in other work:
1. Install work of other sections required to be incorporated with AAC units as work progresses; include anchors, and accessories. Space and align built-in parts; exercise care not to disturb other materials from position.
 2. Coordinate with SEQUENCING AND SCHEDULING Article for required routing and chases.
 3. Fill in interior spaces around built-in items with fine grout or interior plaster.
 4. Fill in exterior spaces around built-in items with fine grout or stucco.
 5. Fill hollow metal frames in AAC unit walls with fine grout as wall is laid. Rake back _" joint between hollow metal frame and adjacent AAC unit to receive sealant at butt type frames.
- C. Mortar joints:
1. Head and bed joints:
 - a. Lay first course in full bed of leveling bed mortar in thickness necessary to level AAC unit top; not less than 3/8 inch.

- b. Apply AAC unit head joint and bed joint mortar on full face of AAC unit already laid.
 2. Make adjustment while mortar is still soft and plastic by tapping to plumb and bringing to alignment.
 3. Check each AAC unit as laid with mason's level for level and plumb with wall below.
 4. Remove and replace mortar with fresh mortar, where adjustment must be made after mortar has started to set.
 5. Keep bed and head joints uniform in width.
 6. Standard thickness for both horizontal and vertical mortar joints:
 - a. Base course bed joint: $\frac{1}{2}$ " , nominal, +/- $\frac{1}{8}$ " .
 - b. Other vertical coursing and head joints: $\frac{1}{16}$ " , nominal.
 7. Take particular care to avoid spreading mortar on exposed face of AAC unit. Only normal mortar droppings will be accepted on face of AAC unit; remove only after mortar has dried enough not to smear.
 - D. Flexible flashing:
 1. Clean AAC unit surfaces smooth; maintain free from projections capable of puncturing flashing material.
 2. Follow requirements indicated in Flexible Flashing Section.
 - E. Joint treatment: Remove excess extruded mortar immediately after laying AAC unit; tooling joints is not required.
 - F. Control joints:
 1. Make joint $\frac{1}{2}$ " wide, unless indicated otherwise, rake out control joints to depth of $\frac{3}{4}$ " while mortar is still plastic.
 2. Provide joints at 24'-0" O.C. unless otherwise indicated.
 3. Leave joint open and clean for caulking in accord with Joint Sealants Section.
 - G. Tolerances:
 1. Maximum variation from plumb: $\frac{1}{8}$ " in 10'-0"; not exceeding $\frac{3}{8}$ " in 20'-0".
 2. Maximum variation from level: $\frac{1}{8}$ " in 20'-0", not exceeding $\frac{1}{4}$ " in 49'-0" or more.
 3. Maximum variation in linear building line from location indicated: $\frac{1}{8}$ " in 20'-0".
- 3.03 CLEANING AND PATCHING
- A. Keep AAC unit work free of mortar droppings as work progresses and, at completion of work, rub AAC unit to remove excess mortar
 - B. Patch AAC units with excessive spalls or chips.

END OF SECTION 04240



MATERIAL SAFETY DATA SHEET

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: AERCON FLORIDA, LLC Autoclaved Aerated Concrete (AAC) Products (see product list at the end of the MSDS)

PRODUCT USE: load-bearing and no-load bearing components for interior and exterior walls, and floor and roof slabs

MANUFACTURED BY: AERCON FLORIDA, LLC
3701 C.R. 544
Haines City, FL 33844

MSDS Request Phone 1-863-422-6360

SECTION 2. COMPOSITION INFORMATION ON INGREDIENTS

<u>COMPONENT</u>	<u>% BY WT.</u>	<u>CAS NO.</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Quartz Sand	60-80	14808-60-7	10 mg/m ³ (as crystalline silica)	0.1 mg/m ³ (respirable)
Ca ₅ (Si ₆ O ₁₈ H ₂)·4H ₂ O	20-40		% SiO ₂ + 2	

SECTION 3. HAZARDS IDENTIFICATION

DESCRIPTION: AERCON FLORIDA, LLC Products

EMERGENCY OVERVIEW

Grinding or cutting of these products may generate nuisance dusts. Acute exposure to dust may cause minor upper respiratory tract, lung, eye, nasal, and skin irritation.

POTENTIAL HEALTH EFFECTS

INHALATION: Prolonged exposure to respirable crystalline silica has been known to cause silicosis, a lung disease which may be disabling. AERCON FLORIDA, LLC AAC Products generates product dusts and granules which are classified as non-quartziferous indicating that there is no real danger for contracting silicosis when exposed to nuisance dusts generated by AERCON FLORIDA, LLC AAC Products.

SIGNS/SYMPTOMS OF OVEREXPOSURE

EYE CONTACT: Dust can cause mechanical eye irritation.

SKIN CONTACT: Handling may cause dry skin.

INGESTION: Not applicable under normal use. May result in obstruction and temporary irritation of the digestive tract if large quantities are consumed.

INHALATION: Irritation of nose and upper respiratory tract, shortness of breath.

SECTION 4. FIRST AID MEASURES

INHALATION: Remove to fresh air. If persistent irritation, severe coughing, or breathing difficulty occurs seek medical attention.

EYE CONTACT: Remove contact lenses. Flush eyes, including under eyelids, with large amounts of water for 15 minutes. If irritation persists, seek medical attention.

SKIN CONTACT: Wash affected areas with soap and water. If irritation persists seek medical attention.

INGESTION: May result in obstruction if ingested. Seek medical attention.

SECTION 5. FIRE FIGHTING MEASURES

FLASH POINT: not applicable

FLAMMABLE LIMITS: not combustible

HAZARDOUS COMBUSTION PRODUCTS: none

AUTOIGNITION TEMPERATURE: not applicable

FIRE EXTINGUISHING MEDIA: not applicable

SECTION 6. ACCIDENTIAL RELEASE MEASURES

To prevent obstruction, do not wash down drain. Sweep, vacuum, or otherwise place material into a waste container for disposal. If needed, use water spray to wet down and minimize dust generation. Wear approved respirator, if necessary.

SECTION 7. STORAGE AND HANDLING

Allow material to remain in protective covering until use. Store in a dry area.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

RESPIRATORY PROTECTION: Wear NIOSH approved respirator when permissible exposure limit to dust may be exceeded during cutting or grinding operations.

EYE PROTECTION: Recommend eye goggles or safety glasses for nuisance dust when cutting or grinding.

SKIN PROTECTION: Protective gloves may be desirable to prevent drying or irritation of hands.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: White or gray blocks or panels. Little or no odor.

PHYSICAL STATE: solid	BOILING POINT:	not applicable
PH: 10-11	MELTING POINT:	not applicable
VAPOR PRESSURE: not applicable	SPECIFIC GRAVITY (H ₂ O = 1):	.4-.7
VAPOR DENSITY: not applicable	SOLUBILITY IN WATER:	not soluble

SECTION 10. STABILITY AND REACTIVITY

STABILITY: stable	INCOMPATIBILITY (MATERIALS TO AVOID): none
CONDITIONS TO AVOID: none	HAZARDOUS DECOMPOSITION PRODUCTS: none
	HAZARDOUS PLOYMERIZATION: not applicable

SECTION 11. TOXICOLOGICAL INFORMATION

CRYSTALLINE SILICA: Crystalline silica is classified by the International Agency for Research on Cancer as a probable human carcinogen (Group 2A) with animal evidence sufficient. Respirable crystalline silica has been classified by the National Toxicology Program (NTP) as a substance which may reasonably be anticipated to be a carcinogen. Crystalline silica is not considered to be a carcinogen by OSHA.

SECTION 12. DISPOSAL CONSIDERATIONS

This product is not considered hazardous waste under Federal Hazardous Waste Regulations 40 CFR 261. Please be advised that state and local requirements for waste disposal may be different from federal regulations.

Dispose of inert solids in landfill or by other procedures in accordance with local, state, and federal regulations.

SECTION 13. TRANSPORT INFORMATION

This product is not a DOT hazardous material.

SECTION 15. PRODUCT LIST

The following is a list of all AERCON FLORIDA, LLC AAC Products:

AERCON FLORIDA, LLC Block
AERCON FLORIDA, LLC Tongue and Groove Block
AERCON FLORIDA, LLC U-Block
AERCON FLORIDA, LLC Clean Out Block
AERCON FLORIDA, LLC Lintel
AERCON FLORIDA, LLC Tongue and Groove Valu Block
AERCON FLORIDA, LLC Interior Wall Panel
AERCON FLORIDA, LLC Load-Bearing Wall Panel
AERCON FLORIDA, LLC Floor Panel
AERCON FLORIDA, LLC Roof Panel

IMPORTANT: The information and data herein are believed to be accurate and have been compiled from sources believed to be reliable. It is offered for your consideration, investigation, and verification. The buyer assumes all risk of use storage, and handling of the product in compliance with applicable federal, state, and local laws and regulations. AERCON FLORIDA, LLC FLORIDA, MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE ACCURACY OR COMPLETENESS OF THE INFORMATION AND DATA HEREIN. THE IMPLIED WARRANTIES OF MECHANABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE SPECIFICALLY EXCLUDED. AERCON FLORIDA, LLC will not be liable for any claims relating to the any party's use of or reliance on information and data contained herein regardless of whether it is claimed that the information and data are inaccurate, incomplete, or otherwise misleading.



CGTEQP THINBED MORTAR

Polymer Modified AAC Adhesive Cement

CGTEQP THINBED MORTAR is a polymer modified, white portland cement adhesive specifically designed to bond autoclaved aerated concrete units for interior and exterior wall construction.

Surface Preparation: All bases to receive **CGTEQP THINBED MORTAR** must be clean, dry, and free of grease, oil, dirt, paint, and any foreign residues.

Mixing: Mix one 55 pound bag with approximately 1 3/4 gallons of clean water for 5 minutes and remix prior to use. The desired consistency is that which allows the mortar to flow easily through a notched trowel.

Application: Apply to autoclaved aerated concrete using an appropriately sized notched trowel. Deposit the proper amount of **CGTEQP THINBED MORTAR** along the center of the horizontal surface to evenly distribute the mortar over the surface. Use the trowel to directly apply mortar to the vertical surface, drawing it from the bottom to the top of the block. Once set, the joint thickness should be approximately 1/16 to 3/32 inch. The mortar allows approximately 5 minutes for straightening and adjustment of the unit before it begins to set.

Precautions: Ambient and surface temperatures must be higher than 40° F and not expected to fall below 40° F within 24 hours. Protect from rain until completely hard.

Drying Time: Total cure obtained in 24 hours.

Package Size: 55 pound bag

Cleaning: Clean tools with water. Protect glass, metal, stone, brick and other area from contact with plaster.

Coverage: One 55 pound bag covers one pallet of autoclaved aerated concrete.

Storage: Product storage life is one year from date of manufacture.

Technical Data:

Compressive Strength	1800 psi
Dry Density	89 lbs/cf
Wet Density	108 lbs/cf
Shear Bond Strength ASTM C1072	85psi* block failure

I. Product Identification

Product Name	Aercon Thinbed Mortar	Manufacturers Name	Elite Building Products, Inc. 4235 Buford Highway Duluth, GA 30096
		Phone (678) 206-0242	

II. Hazardous Ingredients

Material	CAS No.	OSHA PEL: mg/m ³	ACGIH TLV mg/m ³
Portland Cement	65977-15-1	5	10
Silica	14808-60-7	0.1	0.1
Vinyl	1216-01	5	10

III. Health Hazard Data

Routes of Hazard	Basis for Determination
<u>Exposure Determination</u> Inhalation	Contains Silica* * Prolonged inhalation of excessive silica dust may reduce lung function.
Effects of Acute Overexposure	No acute effects.
Effects of Chronic Overexposure	Long term overexposure to high concentrations of this dust without the use of a dust mask may reduce respiratory function in some individuals.
Medical Condition Aggravated by Exposure	Unknown
Eyes and Skin	No special precautions. Flush with water for 15 minutes.
Inhalation and Ingestion	No special precautions.

IV. Physical Data

Boiling Point	N/A	pH	12
Vapor Pressure	N/A	Specific Gravity	2.8
Vapor Density	N/A	Melting Point	N/A
Solubility in Water	Negligible	Evaporation Rate	N/A
Appearance and Odor	Whiteish		

V. Fire and Explosion Data

Flash Point	None	Special Fire Fighting Procedures	None
Flammable Limits in Air	N/A	Unusual Fire and Explosion Hazard	None
Auto Ignition Temperature	None		

VI. Reactivity Data

Conditions Contributing to Instability	Reacts with acids to liberate CO ₂
Conditions Contributing to Hazardous Polymerization	None
Hazardous Decomposition Products	None

VII. Disposal, Spill, or Leak Procedures

Waste Disposal Method	Material is not classified as a hazardous waste under RCRA Section 3001. Use normal solid waste disposal procedures which are in compliance with Federal, State and Local Regulations.
Spill or Leak Procedures	Material is not classified as a toxic pollutant or a hazardous substance under Section 307 and 311 of the Clean Water Act. Accidental releases can be cleaned up by sweeping, vacuuming, or flushing with water.
Neutralizing Chemicals	None required.

VIII. Special Protection Information

Ventilation	Use sufficient general area ventilation. Local exhaust may be necessary where Threshold Limit Values (TLV's) are exceeded or dusty conditions exists.
Personal Protective Equipment	
Eyes	Recommended
Gloves	Recommended
Other	None
Respiratory Protection	For dusty conditions use a dust mask approved by NIOAH.

The information contained in this Material Safety Data Sheet is believed to be reliable. No guarantee is implied or expressed regarding the accuracy of this information or the use of the product since the conditions for use are beyond our control. Nothing contained herein should be construed as a recommendation to use this product in conflict with existing patents covering any material or its use.